

Serial No. 10/628,581

AMENDMENTS

1. (Currently amended) A display controller for use with an electroluminescent display, the controller being arranged to vary the relative phase of signals applied to illuminated segment(s) of the display whereby the brightness of the segment(s) can be varied, wherein the controller further comprises a look-up table which provides a pattern of drive signals and a cycle state counter which is connected to the look-up table, the look-up table in turn being connected to memory containing segment data.

2. (Currently amended) A The display controller as claimed in claim 1, wherein the controller controls the phase of the signals on a cycle-by-cycle basis such that it applies drive signals to the or each segment which are either in phase or in anti-phase with a common signal applied to that segment, whereby the proportion of the signals that are in anti-phase determines the brightness of the segment.

3. (Currently amended) ~~A~~ The display controller as claimed in claim 1, wherein the controller controls the phase of the signals such that a drive signal applied to the or each segment always has an identical waveform to a common signal applied to that segment, but the waveforms of the drive and common signals are selectively relatively phase-shifted by a variable number of degrees in order to determine the brightness of the segment.

Serial No. 10/628,581

4. (Currently amended) A The display controller as claimed in claim 1, wherein there are provided at least sixteen levels of brightness.

5. (Currently amended) A The display controller as claimed in claim 1, wherein there are provided at least thirty-two levels of brightness.

6. (Currently amended) A The display controller as claimed in claim 1, arranged to provide separate control of the phase of a plurality of signals for controlling a corresponding plurality of segments of a multi-segment display.

7. (Currently amended) A The display controller as claimed in claim 1, wherein the controller minimizes clustering of ON drive signals ~~provides a in the pattern~~ of ON and OFF signals provided for each level of brightness ~~that minimizes clustering of~~ ~~"ON" drive signals.~~

8. (Cancelled) A display controller as claimed in claim 7 comprising a look-up table which provides a pattern of "ON" drive signals that minimizes clustering for each given level of brightness.

Serial No. 10/628,581

9. (Cancelled) A display controller as claimed in claim 8, further comprising a cycle state counter connected to the look-up table, the look-up table in turn being connected to memory containing segment data.

10. (Currently amended) ~~A~~ The display controller as claimed in claim 1, the controller being arranged to illuminate a plurality of different segments simultaneously such that the segments are driven using drive signal patterns that are substantially out of phase with each other.

11. (Original) A controller for use with a multi-segment electroluminescent display, the controller providing an alternating voltage common output and a plurality of alternating voltage drive outputs for the segments, wherein, during each cycle, the controller causes the drive outputs to be either in phase or in anti-phase with the common output such that the brightness of the segments may be controlled.

12. (Currently amended) ~~A~~ The controller as claimed in claim 1, wherein the controller comprises a control unit that provides control signals to a plurality of switches, the switches each controlling a drive voltage for a segment.

Serial No. 10/628,581.

13. (Currently amended) A The controller as claimed in claim 12 wherein said control signals control a plurality of half H-bridges, the terminals of the half H-bridges being connected respectively to ground and to a high voltage DC supply, whereby the half H-bridges provide an AC drive voltage.

14. (Currently amended) A The controller as claimed in claim 13, wherein one of said half H-bridges provides a common signal and the remaining H-bridges provide drive signals.

15. (Currently amended) An electroluminescent display in combination with a the controller as claimed in claim 1.

16. (Original) A method of controlling an electroluminescent display comprising varying the relative phase of the drive and common signals applied to the illuminated segment(s) of the display whereby the brightness of the segment(s) can be varied.

17. (Currently amended) A The method of controlling an electroluminescent display as claimed in claim 16, comprising the use of a controller, the controller being arranged to vary the relative phase of signals applied to illuminated segment(s) of the display whereby the brightness of the segment(s) can be varied.

Serial No. 10/628,581

18. (Currently amended) ~~A~~ The controller as claimed in claim 11, wherein the controller comprises a control unit that provides control signals to a plurality of switches, the switches each controlling a drive voltage for a segment.

19. (Currently amended) ~~A~~ The controller as claimed in claim 18, wherein said control signals control a plurality of half H-bridges, the terminals of the half H-bridges being connected respectively to ground and to a high voltage DC supply, whereby the half H-bridges provide an AC drive voltage.

20. (Currently amended) ~~A~~ The controller as claimed in claim 19, wherein one of said half H-bridges provides a common signal and the remaining H-bridges provide drive signals.

21. (Currently amended) ~~An~~ The electroluminescent display in combination with a controller as claimed in claim 11.

22. (Currently amended) ~~A~~ The method of controlling an electroluminescent display as claimed in claim 16, comprising the use of a controller, the controller providing an alternating voltage common output and a plurality of alternating voltage drive outputs for the segments, wherein, during each cycle, the controller causes the drive outputs to be either in phase or in anti-phase with the common output such that the brightness of the segments may be controlled.

Serial No. 10/628,581

23. (New) A display controller for use with an electroluminescent display, the controller being arranged to illuminate and vary the brightness of a plurality of segments of the display by varying the relative phase of signals applied to the illuminated segments such that drive signals used to drive the segments are substantially out of phase with each other.